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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
| 10/572,596 | 11/14/2008 | Golok Bihari Nando | 287764US59PCT | 2910 |
| 22850 | 7590 | 04/05/2011 | EXAMINER | |
| OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314 | | | RABAGO, ROBERTO | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1762 | |
| | | | NOTIFICATION DATE | DELIVERY MODE |
| | | | 04/05/2011 | ELECTRONIC |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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| | | | |
|------------------------------|--------------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 10/572,596 | Applicant(s) NANDO ET AL. | |
| | Examiner Roberto Rabago | Art Unit 1762 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/9/2007</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Objections

1. (a) Claims 1 and 9 are objected to because they do not end with a period.
(b) Claims 1-7 are objected to because the first line of each claim includes the word "novel." This is not a substantive limitation, but rather an expression of applicants' opinion regarding patentability over prior art, and is not proper in a patent claim.
(c) In claim 8, line 3, "syntetic" is misspelled.
(d) Claim 17 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim must refer to a prior claim in the alternative only.
See MPEP § 608.01(n).

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
(a) In claims 1 and 7, and all claims dependent thereon, the claims are indefinite because the parameter "n" is undefined. While it appears that the R₁ substituents may be intended to describe rubber components, the unspecified nature of "n" and lack of

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description renders unclear both the identity of the required rubber and the scope of repeating units R_1 .

(b) In claims 1 and 7, and all claims dependent thereon, the claims are indefinite because the location of the R_1 attachment site on the repeating groups is not clearly specified. While it appears that the intended site may be the apparent deficient carbon atom of each R_1 structure, the claims should clearly specify the intended scope of attachment locations for R_1 .

(c) In claim 2, properties i) through l) the basis of comparison appears to be all known natural and synthetic rubber. The properties are indefinite because the determination of whether or not a specific sample is within the scope of the claims would depend on the nature of the comparison rubber. Given such a vague basis for comparison, the intended scope cannot be determined.

(d) In claim 2, "superior tensile properties" is indefinite because it cannot be determined which tensile properties are intended, and what is considered to be superior.

(e) In claim 2, "better aging resistance" is indefinite because the specification does not appear to describe a defined test method to determine this property.

(f) In claim 2, "enhanced cure properties" is indefinite because it cannot be determined which cure properties are intended, or what is considered to be enhanced.

(g) In claims 4-6, insufficient antecedent basis exists for each of the limitations "the natural rubber," the synthetic rubber," and "the cardanol." It would appear that these claims should properly depend from claim 3.

(h) In claims 7 and 8, the intended meaning of “the desired product” is indefinite.

(i) In claims 10 and 11, the claims are indefinite because the limitation “its derivative” is beyond the scope of the parent claim, which specifies only cardanol or phosphorylated cardanol.

(j) In claim 11, the claim are indefinite because the limitation “20-30°C” is beyond the scope of the parent claim, which specifies reaction at 25-150°C.

(k) In claim 15, it is not understood how a phosphorylated or chlorinated derivative of cardanol is a synthetic rubber.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-3, 5 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by GB 1523076.

The reference discloses reaction of polybutadiene with cardanol from CNSL to obtain the grafted product (see page 2, lines 70-85; page 2, line 111 through page 3, line 5; Examples 1-3.

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roberto Rabago whose telephone number is (571) 272-1109. The examiner can normally be reached on Monday - Friday from 8:00 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roberto Rabago/
Primary Examiner
Art Unit 1762

March 26, 2011